

What Is Claimed Is:

1. A color image forming device which forms an output image corresponding to input image data on a recording medium using pigments of four colors cyan, magenta, yellow, and black, the color image forming device comprising:

a color separation part that generates color image data separated by colors corresponding to the pigments of the four colors from the input image data, or obtains, as the input image data, color image data separated by colors corresponding to the pigments of the four colors; and

an image forming part that, of the color image data generated or obtained by the color separation part, makes a screen angle of a first output image corresponding to the color image data of yellow identical with a screen angle of a second output image corresponding to the color image data of one of cyan, magenta, and black, and brings the screen of the first output image out of phase with the screen of the second output image.

2. The color image forming device according to claim 1, wherein the image forming part sets the differences among the screen angles of three output images corresponding to the color image data of cyan, magenta, and black in the range of about 25 to 40 degrees.

3. The color image forming device according to claim 1, wherein the image forming part comprises a halftone generation part that compares data for creating dot patterns having periodic structures corresponding to four colors cyan, magenta, yellow, and black with the four pieces of color image data generated or obtained by the color separation part, and generates halftone image data, and an image forming part that forms image data for image output, based on the halftone image data generated by the halftone

generation part, wherein the screen angles and phases of the first and second output images, or the differences among the screen angles of output images corresponding to the color image data of cyan, magenta, and black are set by at least one of the halftone generation part and the image forming part.

4. The color image forming device according to claim 1, wherein the second output image corresponds to the color image data of black.

5. The color image forming device according to claim 1, wherein one of main spectrums of the screen of an output image corresponding to the color image data of yellow or black is the same as a differential spectrum between one of main spectrums of the screen of an output image corresponding to the color image data of cyan and one of main spectrums of the screen of an output image corresponding to the color image data of magenta.

6. The color image forming device according to claim 1, wherein each of the screens of four output images corresponding to the color image data of cyan, magenta, yellow, and black has 200 lines or more per inch.

7. The color image forming device according to claim 1, wherein the color separation part generates or obtains the color image data of black only in a low-brightness and low-chroma color area.

8. The color image forming device according to claim 7, wherein the color separation part generates or obtains the color image data of black only in a area where  $C^*$  is 40 or less, and  $L^*$  is 40 or less.

9. A color image forming method which forms an output image corresponding to input image data on a recording medium using pigments of four colors cyan, magenta, yellow, and black, the color image forming method comprising the steps of:

making a screen angle of a first output image corresponding to the

color image data of yellow identical with a screen angle of a second output image corresponding to the color image data of one of cyan, magenta, and black; and

bringing the screen of the first output image about 150 degrees or more and about 210 degrees or less out of phase with the screen of the second output image.

10. The color image forming method according to claim 9, comprising the step of:

setting the differences among the screen angles of three output images corresponding to the color image data of cyan, magenta, and black in the range of about 25 to 40 degrees.

11. The color image forming method according to claim 9, wherein one of main spectrums of the screen of an output image corresponding to the color image data of yellow or black is the same as a differential spectrum between one of main spectrums of the screen of an output image corresponding to the color image data of cyan and one of main spectrums of the screen of an output image corresponding to the color image data of magenta.

12. The color image forming method according to claim 9, forming an output image corresponding to the color image data of black only in a low-brightness and low-chroma color area.